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Independent System Operator

Alternative ICAP Market Parameters for Certain New Resource Entry

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Agenda

- Review background on considerations for new market entry by certain resources in the Installed Capacity (ICAP) market and associated ICAP market parameters
- Review current and discuss proposed rules for notice of intent to commence ICAP market participation
- Review and discuss market design concept to accommodate two sets of ICAP market parameters to help coordinate new market entry by certain resources
- Next Steps

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Previous ICAPWG Presentations

Date	Working Group	Links to Materials
June 3, 2025	ICAPWG/MIWG	Champlain Hudson Power Express (CHPE): Capacity Market Integration Considerations

Project Overview

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Background

- **This is a continuation from the considerations introduced in the 6/3/2025 ICAPWG presentation titled "Champlain Hudson Power Express (CHPE): Capacity Market Integration Considerations"**
- **NYISO's capacity market is set up with mostly annual inputs and some seasonal parameters:**
  - The installed reserve margin (IRM) study makes inclusion assumptions for the entire Capability Year, which will generally carry through into the Locational Minimum Installed Capacity Requirement (LCR) study, import rights study and Capacity Accreditation Factor (CAF) calculations
    - Unforced Capacity Deliverability Right (UDR) usage elections are established for the entire Capability Year based on the information provided by UDR holders
  - Demand curves and unit specific derating factors are updated for each of the Capability Period
- **The assumptions applied to new UDRs, and certain other new resources impact the inputs for relevant annual ICAP market parameters (i.e., IRM, transmission security limit (TSL) floor values, LCRs, import rights, and CAFs), as well as seasonal parameters (e.g., demand curves and unit specific derating factors)**
  - For the 2026-2027 Capability Year, any new UDRs awarded for the Champlain Hudson Power Express (CHPE) project and assumptions regarding the usage thereof will impact ICAP market parameters
  - The NYISO is continuing to monitor the progress of the CHPE project, and closely coordinating with the New York State Reliability Council (NYSRC) on the IRM modeling assumptions for the 2026-2027 Capability Year

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Background (cont.)

- **Misalignment between assumptions imbedded in the ICAP market parameters and actual ICAP market participation of certain new UDRs and other new resources can arise**
  - For example, this may arise in the 2026-2027 Capability Year if the IRM study model includes capacity supplied using CHPE UDRs, but CHPE does not reach in-service and/or commence capacity market participation until after May 2026
- **Such misalignment concerns can arise with all new entry and exit of capacity supply resources; however, the nature of projects such as CHPE warrant careful consideration (see next slide for additional information regarding the potential impacts of the CHPE project)**
  - CHPE is greater than 10% of the Summer 2026 forecasted peak load for Load Zone J; and
  - As a New York City capacity supply resource, assumptions regarding the CHPE UDRs can impact the nature/magnitude of the contingencies considered in assessing transmission system transfer capability into New York City, and the TSL floor value for New York City
  - In the future, ICAP market entry by other new capacity supply resources (including new UDRs) may present similar considerations

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Potential Impact of CHPE

- **CHPE modeling is expected to impact certain market parameters based on preliminary assessments**
  - IRM: Based on a preliminary impact assessment conducted by the NYSRC Installed Capacity Subcommittee (ICS),[1] the modeling of CHPE (as an isolated modeling assumption) is not expected to have significant impact on the IRM
    - The prior ICS analysis identified a potential 0.1% increase to the IRM of the 2024-2025 IRM study final base case resulting from the inclusion of CHPE
  - TSL Floor Values for LCR Determinations: The NYISO conducted a preliminary assessment of the potential impact of CHPE on the previously calculated 2025-2026 TSL Floor value for Load Zone J using information from the Q1 2025 Short-Term Assessment of Reliability (STAR).[2] This preliminary assessment identified a potential increase of approximately 4% to the previously calculated 2025-2026 TSL floor value for Load Zone J
    - The potential impact to the Load Zone J TSL floor value is due to the expectation that inclusion of CHPE UDRs will change the loss of source contingency analyzed in determining transfer capability into Load Zone J resulting in a decrease in the bulk transfer limits into Load Zone J
    - For purposes of this preliminary assessment, the NYISO utilized an estimated bulk power transfer limit into Load Zone J of 2,452 MW. This estimated value was derived by subtracting the loss of source contingency for Load Zone J with CHPE UDRs from the total Load Zone J alternating current (AC) import limit used in the transmission security margin assessment conducted as part of the Q1 2025 STAR
      - All other data input values for the 2025-2026 TSL Floor value calculation for Load Zone J remained unchanged for purposes of the NYISO's preliminary assessment
    - It is important to note that the Bulk Power Transfer Limit analysis for the 2026–2027 Capability Year has not yet been conducted

1. CHPE Test Case in the NYSRC Tan45 Whitepaper
2. Q1 2025 STAR Report (see Figure 57)

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Potential Impact of CHPE (cont.)

- Other downstream parameters: Given the impact on the TSL floor value for Load Zone J, other downstream parameters are also likely to be impacted by the modeling of CHPE, including CAFs, import rights, unit specific derating factors, and demand curves

- **It is important to note that the potential impacts described herein are preliminary and intended as illustrative only. The potential impacts of the CHPE project on the ICAP market parameters for the 2026-2027 Capability Year have not yet been determined and will be developed through the remainder of 2025 and Q1 2026**

Estimate of CHPE Impact on NYC TSL Floor			
Transmission Security Limit	Formula	Final 2025 - 2026 Capability Year (Without CHPE)	Estimated Transfer Limit with CHPE
Non-Coincident Load Forecast (MW)	[A] = Given	11,044	11,044
Coincident Load Forecast	[P] = Given	10,802	10,802
Bulk Power Transmission Limit (MW)	[B] = Studied	2,875	**2,452**
Net Flow Adjustment (MW)*	[N] = Study Assumption	0	0
Offshore Wind (MW)	[O] = Given	0	0
UCAP Requirement (MW)	[C] = [P]-[B]+[N]+[O]	7,927	8,350
UCAP Requirement Floor	[D] = [C]/[A]	71.8%	75.6%
5-Year DF, Current	[E] = Given	3.26%	3.26%
Special Case Resources (MW)	[F] = Given	478.7	478.7
ICAP Requirement (MW)	[G] = ([C]/(1-[E]))+[F]	8,673	9,110
ICAP Requirement Floor (%)	[H] = [G]/[A]	78.5%	**82.5%**

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New ICAP Market Entry: Notice of Intent to Participate

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Notice Requirement for New Resources: Current

ICAP Manual Section 4.2.5 Requirements:

- **New ICAP supply resources must provide advance notice of intent to commence participation in the ICAP market**
  - Notice is intended to allow the NYISO to prepare and be able to accommodate a new resource should that resource proceed to timely complete the necessary steps for qualification (e.g., data submittal and DMNC testing)
  - Notice does not obligate a new resource to qualify for participation consistent with the timing provided in the notice; new resources may subsequently delay such timing through submission of a revised notice(s)
  - Does not require satisfaction of certain milestones to be eligible to submit a notice
- **A new resource must submit its notice of intent to commence ICAP market participation on or before 5 P.M. on the first business day of the month, before the month in which it wishes to qualify**
  - For example, to qualify to participate in capacity auctions conducted in April for the May delivery month, the NYISO must receive the required notice no later than 5 P.M. on the first business day of March

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Notice Requirement for New Resources: Proposed Change

- **NYISO proposes to modify the current notice of intent to commence ICAP market participation requirements for certain new capacity supply resources (referred to herein as a "triggering resource")**
- **The following conditions constitute a triggering resource:**
  1. a new capacity supply resource (including new UDRs) whose entry would change the contingencies evaluated in assessing the transfer capability into a Locality for purposes of establishing the TSL floor value for such Locality; and
  2. such resource has been included as a capacity supply resource and assumed to supply capacity in the IRM study for the Capability Year during which such resource first seeks to commence ICAP market participation
- **Proposed enhancements to the current notice requirements for triggering resources:**
  - Must achieve "commercial operation" prior to submission of a notice of intent to commence ICAP market participation
    - OATT Section 40.1 defines "commercial operation" to mean that a facility has commenced generating or transmitting electricity for sale, excluding electricity generated or transmitted during trial operations (i.e., on-site test operations and commissioning)
  - Advance notice requirements remain unchanged (i.e., notice must be provided on or before 5 P.M. on the first business day of the month before the month in which the triggering resource wishes to qualify, provided that the triggering resource has achieved commercial operation)
    - For example, to qualify to participate in capacity auctions conducted in April for the May delivery month, a triggering resource must achieve commercial operation and provide notice no later than 5 P.M. on the first business day of March

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Notice Requirement for New Resources: Proposed Change (cont.)

- The additional requirement for a triggering resource to achieve commercial operation prior to submission of a notice of intent to commence ICAP market participation seeks to provide greater certainty as to the timing for such resource to begin offering in the ICAP market, significantly improve potential alignment of ICAP market parameter assumptions and actual market conditions, and improve predictability and transparency of expected market outcomes
- The existing notice requirements in ICAP Manual Section 4.2.5 for new capacity supply resources that do not qualify as a triggering resource would remain unchanged
  - Any new capacity supply resource whose entry would not change the contingencies evaluated in assessing the transfer capability into a Locality for purposes of establishing TSL floor value for such Locality provided that such resource has been included as new capacity supply in the in the IRM study for the Capability Year in which the resource first seeks to commence ICAP market participation
  - Any new capacity supply resource that has not been included as new capacity supply in the IRM study for the Capability Year in which the resource first seeks to commence ICAP market participation regardless of the potential impact of such resource on the transfer capability contingencies evaluated in establishing the TSL floor value for the Locality in which the resource qualifies to supply capacity
- Consistent with the existing notice requirements, a new capacity supply resource (including new UDRs) that does not qualify as a triggering resource will not be required to achieve commercial operation prior to submitting a notice of intent to commence participation in the ICAP market

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ICAP Market Parameters: Proposed Changes

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Overview of Proposed Changes

- **For a Capability Year that includes a triggering resource, the NYISO proposes the development and potential use of two sets of ICAP market parameters (see following slides for additional details)**
  - Differing sets of ICAP market parameters would only be used if a triggering resource will not commence ICAP market participation for the May delivery month (i.e., the first delivery month of the Capability Year)
  - An alternative set of market parameters would apply during the interim period until the triggering resource is expected to commence participation in the ICAP market
  - The NYISO will provide advance notice to the marketplace regarding the ICAP market parameters that will be used for May and, if the participation of a triggering resource is delayed beyond May, the timing for any subsequent required change to the effective set of ICAP market parameters
- **Absent a triggering resource, the NYISO shall continue using one set of ICAP market parameters consistent with the current procedures**

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Overview of Proposed Changes (cont.)

- **For a Capability Year that includes a triggering resource, the NYISO proposes to develop two sets of ICAP market parameters to help improve potential alignment of ICAP market parameter assumptions and actual market conditions; however, achieving "perfect" market alignment may not be feasible**
  - This is a similar concept to the existing rules that allow two sets of LCRs to be developed to address conditions for new UDR capacity supply interconnecting with a neighboring region with a misaligned capacity year start date (i.e., neighboring market's capacity year does not start May 1)
- **The two sets of market parameters would be based off the following cases:**
  1. IRM study results case that assumes the triggering resource is in service and participating in the ICAP market
     - Consistent with current procedures, the NYISO does not propose to change the status assumptions of any resource in such case (i.e., the resource assumptions approved by the NYSRC and reflected in such case would be maintained)
  2. An alternative case that revises only the status assumption of the triggering resource to assume that such resource is not in service and not participating in the ICAP market
     - The NYISO does not propose to change the status assumptions of any other resource as approved by the NYSRC and reflected in the IRM study results case (i.e., only the status assumption of the triggering resource would be changed in the alternative case)

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Overview of Proposed Changes (cont.)

- **The NYISO proposes that the following ICAP market parameters would be developed for each case:**
  - TSL floor values and LCRs
  - CAFs and associated unit specific deratings factors
  - System translations factors, Unforced Capacity (UCAP) demand curve parameters, and Load Serving Entity (LSE) minimum capacity requirements
- **The NYISO recommends that a single case be used to develop the following market parameters:**
  - Import right limits
  - Peak Load Windows
- **The NYISO is continuing to evaluate the appropriate case to use for establishing import right limits and Peak Load Windows. Considerations include:**
  - Potential use of the case that provides the more conservative outcomes
  - Potential use of the case based on the IRM study results (i.e., consistent with current procedures)
- **The NYISO proposes that both sets of ICAP market parameters be developed consistent with the timing of current practices**
- **The NYISO would need new tariff authority to allow for the potential use of more than one set of ICAP market parameters**

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Proposed Changes: 2026-2027 Capability Year Examples

- **Scenario 1: If the final 2026-2027 IRM study model assumes CHPE is not in-service and/or CHPE UDRs are not used to supply capacity:**
  - No triggering resource would exist and one set of ICAP market parameters based on the case reflecting the results of the IRM study would be used for the 2026-2027 Capability Year (i.e., no change to current procedures)

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Proposed Changes: 2026-2027 Capability Year Examples (cont.)

- **Scenario 2: If: (1) the final 2026-2027 IRM study model assumes CHPE is in service and CHPE UDRs are used to supply capacity, and (2) CHPE UDRs are ready for participation in the ICAP market for the May 2026 delivery month (subject to the proposed notice enhancements described herein for triggering resources):**
  - The NYISO proposes that the ICAP market parameters based on the case reflecting the results of the IRM study would be used for the 2026-2027 Capability Year
  - In this case, a triggering resource would exist and the NYISO would develop two sets of ICAP market parameters for potential use. The NYISO would provide notice to the marketplace that only one set of ICAP market parameters will be used for the 2026-2027 Capability Year consistent with the expectation that the CHPE UDRs will commence participation for the May 2026 delivery month
  - Based on the proposed notice enhancements, participation of CHPE UDRs for the May 2026 delivery month would require CHPE to achieve commercial operation and the UDR rights holder(s) to provide notice of the intent to commence ICAP market participation by 5 p.m. on March 2, 2026 (i.e., the first business day of March 2026)

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Proposed Changes: 2026-2027 Capability Year Examples (cont.)

- **Scenario 3: If: (1) the final 2026-2027 IRM study model assumes CHPE is in service and CHPE UDRs are used to supply capacity, and (2) CHPE UDRs are not ready for participation in the ICAP market for the May 2026 delivery month:**
  - The NYISO proposes that market parameters based on the alternative case assuming CHPE out of service would be used until CHPE UDRs are ready for participation in the ICAP market, at which point market parameters for the case reflecting the results of the IRM study would be used for the balance of the 2026-2027 Capability Year
  - Consistent with Scenario 2, the NYISO would develop two sets of ICAP market parameters for potential use because a triggering resource exists. Both sets of ICAP market parameters would be used for a portion of the 2026-2027 Capability Year based on the assumption in this example that CHPE UDRs are not able to commence participation in the ICAP market for the May 2026 delivery month
  - The NYISO would provide notices to the marketplace of the ICAP market parameters effective beginning May 2026, as well as the implementation of revised ICAP market parameters
  - The delivery month to implement the revised ICAP market parameters would be consistent with the timing for the CHPE UDRs to commence ICAP market participation as reflected in the required notice

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Next Steps

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Next Steps

- July/August ICAPWG: Continue to discuss proposed changes including associated tariff revisions
- Currently targeting to seek stakeholder approval of proposed changes at the August 2025 Business Issues Committee and Management Committee meetings
  - Intended to facilitate an early Q4 2025 FERC filing of any proposed changes approved by stakeholders and the NYISO Board of Directors

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Questions?

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Appendix

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Existing Requirements for Awarding and Offering UDRs

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Requirements for Awarding UDRs to New Resources

- ICAP Manual Section 4.14.2: Requires a qualifying transmission project seeking UDRs to submit a written request by August 1 to be granted UDRs capable of being used during the upcoming Capability Year (e.g., request due by August 1, 2025, for the 2026-2027 Capability Year)
  - If a request for new UDRs is received after August 1, the UDRs will be considered as only available to provide emergency assistance for the upcoming Capability Year for purposes of the IRM study
- To be awarded UDRs, a qualifying transmission project must seek Capacity Resource Interconnection Service (CRIS) and satisfy the Deliverability Interconnection Standard
- OATT Section 40.13.12.3: Provides that CRIS for generators and UDRs becomes effective to allow a resource to qualify for ICAP market participation when the associated project is “in service,” provided that it has paid its share of any System Deliverability Upgrade costs (or provided a satisfactory commitment to pay)

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UDRs Offered in Capacity Auctions

- UDRs may be offered in NYISO-administered ICAP auctions when previously combined with qualified UCAP
- ICAP Manual Section 4.9: Specifies the information/data submission and timing requirements for External ICAP Suppliers
- ICAP Manual Section 4.4: Establishes the operating data submission and timing requirements for resources; the requirements vary by resource type

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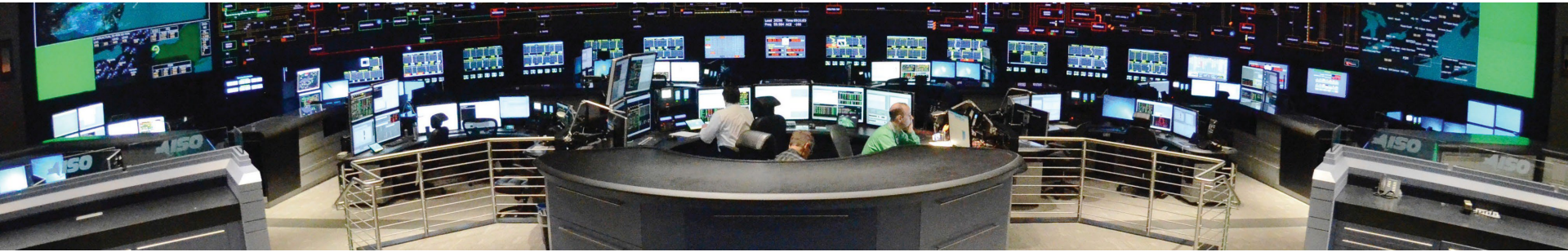
Our Mission and Vision

Mission

Ensure power system reliability and competitive markets for New York in a clean energy future

Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation



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